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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items	305 to 307
The Silver Lining of the Clouds.....	305
Early Swarms in England.....	305
International Exhibition in Germany.....	306
North American Bee-Keepers' Society.....	306
Inventor of Broad Frames for Sections.....	306
The Albino Bee Controversy.....	306
Bee-Keepers' Associations	307

Among Our Exchanges—

Honey Shows.....	307
The Weather and Feeding.....	307
The Crafty Bee and its Sting.....	307
Introduction of Italian Bees in England..	307
The Honey Prospect	307

Correspondence—

Care of Comb Honey—No. 1.....	308
Reply to Mr. Clarke.....	308
Wintering Bees in Clamps.....	309
Fastening Foundation in Sections.....	309
Bee Forage of Southern Texas.....	310
Shading for Bee Hives.....	310
The Functions of Queen Bees.....	311

Convention Notes—

Utah Bee-Keepers' Convention.....	312
Pasturage or Forage for Bees.....	312
Tuscarawas Valley, O., Convention.....	313

Selections from Our Letter Box—

Drone Trap.....	313
Promising.....	313
Bees Doing Well in Wisconsin.....	313
Wintered Well.....	313
Free Advertising.....	313
Waters Receded.....	313
Bees Doing Well.....	314
Rubber for Bellows Smokers.....	314
Wintering Bees.....	314
Still Cold and Cheerless.....	314
Honey Harvest in Texas.....	314
Wintered Successfully Again.....	314
Unusually Early.....	315
Excessive Swarming.....	315
Sweet Clover.....	315
A Prolific Queen.....	315
Bees in Utah.....	315
Well for Philadelphia.....	315
An Abundance of Bloom.....	315
Rearing Queens.....	316
Bees Light.....	316
Bee-Keeping in Colorado.....	316



The Silver Lining of the Clouds.

We have had much unfavorable weather recently—cold, chilling rains and northerly winds prevailing in the Central States, with frequent heavy frosts and snow flurries in the Northern and Eastern. During all of last week the weather was not only unfavorable for the farming interests, but bees also have suffered as well. Many colonies bred up especially early and quite strong, have consumed their stores voraciously, while those not bred up have dwindled till now very weak. One lot of a car-load located in this vicinity, shipped from Arkansas about the 20th of March, were very strong upon arrival and heavy with honey, having been wintered in two-story hives well filled with stores. In the eight weeks since shipment they have become greatly depleted in numbers, and have not only consumed all their stores, but it has been absolutely necessary to feed largely to prevent starvation. We must deeply impress upon all to look well to the condition of the bees—see that they are amply protected from cold and dampness, and are always provided with a future supply of honey, syrup or good candy, until settled weather shall have arrived; it will be found much more satisfactory to remove with the extractor a few pounds of honey that may be left over from feeding, at the beginning of white clover bloom, than to build up the starving remnants of colonies, or store away the empty hives which have been depopulated through sheer neglect to provide food when needed most.

The experience of this spring again

raises the doubt, whether it is most advisable to breed up colonies very strong till continuous mild weather has arrived—whether a prospective fruit surplus will recompense its more frequent failure?

But the provident, patient apiarist can realize no cause for despondency in our present disagreeable weather. A good surplus honey crop from the fruit trees is most frequently followed by a light yield from white clover. The prevalence of dry, hot weather during fruit bloom retards the spread and matting of the white clover rootlets and dwarfs its growth, thereby lessening the quantity of bloom and its duration. An examination this morning (May 13), revealed an unusual vigor in its growth and development in this locality; and the dandelion clumps, which usually give their blossoms only in succession, reveal scores each of flowers, which await but the sun's enlivening rays to burst forth in myriad discs of seeming gold, reflecting back its welcome from their emerald surroundings. Nor does the season forebode a repetition of last summer's drouth, to withhold the summer and fall bloom till too late to be harvested with profit; but everything is yet hopeful for the best. Get the bees in shape to take the fullest advantage of a bountiful honey bloom. It is said "every cloud has its silver lining," and we believe the despondency and gloom of the present will be transformed into mirth and gladness in the "sweet by-and-by."

Early Swarms in England.—The London *Horticultural Journal* says that Mrs. Wain, at Walton-on-Thames, had a very strong swarm on April 21, and expected others the next day, had not the weather become showery and windy. The surplus sections have been on a month and are partly filled with comb.

International Exhibition in Germany.

We have received the following circular from the Executive Committee of the proposed International Congress to be held in Germany in July, 1883, which will explain itself to our readers:

In consequence of the many suggestions which have been put forward, the undersigned have combined for the holding at Hamburg, in July, 1883, of an International Exhibition of animals connected with agriculture.

Looking back to the acknowledged benefits to the farming interests which resulted from the first International Agricultural Exhibition which was held here in 1863, and which was also the first of its kind held in Germany, the undersigned are strongly of opinion that a repetition of the undertaking, after a lapse of 20 years, will be productive of similar service to the agricultural world, especially as the opportunity of international comparison, as well as competition, will be offered thereby, through the extensive progress which has been made in breeding during the last two decades.

Parties interested in this matter in all countries, are therefore cordially invited, both to take part in and to visit this Exhibition, which will be held in July, 1883, and will comprise the following departments, each of which are presided over by Special Committees:

1. Horse breeding (including mules and asses).
2. Cattle breeding.
3. Sheep breeding.
4. Pig breeding.
5. Bee-culture.
6. Pisci-culture.
7. Poultry breeding.
8. Stables, tools, etc., for the different branches of cattle breeding.
9. Scientific aids to the above.

By particular request of the Provisional Committee, the editor of the *Weekly BEE JOURNAL* has consented to take charge of the American bee interests at that Congress, and hopes to have the cordial co-operation of all American breeders. If we can breed up the "coming bee" and there exhibit it to the World, it will be an achievement worthy of the best endeavors of the present generation of bee masters. This is an opportunity for the sinking of all petty animosities and rivalries for the general good, and we hope that it will be accepted and improved as such.

The circular further says that "the Senate of Hamburg, as well as the Prussian Minister of Agriculture and Forests, have kindly promised to give the exhibition their cordial support, and an executive committee has been formed for the carrying out of the Exhibition."

We shall keep our readers informed of the progress of affairs in connection with the proposed Exhibition, and will be glad to receive suggestions and opinions concerning the American display from breeders—all of whom are invited most cordially to correspond with us on the subject, either privately or through the columns of the *Weekly BEE JOURNAL*.

North American Bee-Keepers' Society.

We have received the following circular from Prof. Cook, which is worthy of careful perusal by the bee-keepers of America. As the time fixed for the assembling of the next Convention is rapidly approaching, its publication will not be considered premature, and may serve as a reminder to some who will require time for preparation:

State Agr'l College, Lansing,)
Michigan, May 11th, 1882. }

To the Vice Presidents of the National Bee-Keepers' Association, and the Bee-keepers of America:—I beg leave to call your attention through the several bee papers of the country, to the next meeting of our Association, to be held in the city of Cincinnati some time in October next.

All disinterested friends of apicultural progress will recognize the valuable work of the Association, and the greater good that may come, yes, and will come, when all our associations are harmoniously working together to build up our art. Those present at the last meeting at Lexington will recall the perfect harmony, and the perfect spirit of accord that prevailed during the entire meeting, and the feeling of real satisfaction that was manifested by those present from every section. Let us commence early to secure even greater fruits at the next meeting. With this end in view, I wish to offer some suggestions:

Let any one who wishes the character of the meetings changed in any particular, write to me at once, and their wishes shall receive earnest attention.

Let the delegates from each State come prepared to give accurate data as to the honey crop for the season of 1882, that we may be able to give the best advice as to the marketing of the crop.

Let it be remembered that committees were appointed to experiment in several lines, particularly in controlling fertilization, and let us hope that full and able reports will be rendered. Let others come prepared to add to the reports, and to discuss them.

In accordance with the general opinion, few and short essays will be read, that the discussions may be more full. With this in view, let every person come prepared to give quick and accurate accounts of what he has learned that will be helpful to the bee-keepers of the country.

Let us hope for a large attendance of the enthusiastic bee-keepers of the country, and that all may come full of the spirit of progress, good feeling and harmony, that the meeting may be great in the good that shall be accomplished, and entirely free from all harsh, uncharitable words, which, in no convention, tend to edification.

A. J. COOK, *Pres.*

Inventor of Broad Frames for Sections.

Mr. H. H. Flick writes us regarding our answer to Mr. Friedemann Greiner, on page 258, as follows:

Are you not mistaken in the issue of April 26, page 258, about sections and broad frames? I claim the honor of inventing the frame to hold sections. By referring to the Patent Office, you will find that my patent covers the broad frame holding sections, which was dated on Sept. 21, 1869, and ante-dated Sept. 8, 1869, and numbered 95,100.

We cannot see wherein we made any mistake. Mr. Greiner inquired if sections were in use in this country before the year 1875, and whether it was so published in the *BEE JOURNAL* of 1874 or 1875. Upon examining our back volumes we found several mentioned before that time, referring to them and reproducing the identical cuts used to illustrate the several inventions at the respective dates. We gave no one credit for originating anything except so far as indicated in the back numbers of the *BEE JOURNAL*, and if Mr. Flick's invention was noticed or advertised previous to 1875, we overlooked it. We did not say those parties, or any of them, were the inventors of the broad frame, nor that Mr. Flick was not. We merely cited the cases on record to prove that sections were used in America prior to the time that they were claimed to have been invented in Germany. We would not intentionally deprive any man of credit to which he is justly entitled, and especially regarding so important a matter as the section case or broad frame.

The Albino Bee Controversy.—Mr. S. Valentine, on page 199 of the *BEE JOURNAL*, gave the origin of the term "albino," as applied to that particular strain of bees, and claimed to have been their originator as a fixed type; to this Mr. D. A. Pike rejoined in an article published on page 250, claiming at least a share of the credit. We have received still another communication from Mr. Valentine on the subject, but as both gentlemen have already been heard, and each made out

a pretty strong case, we will have to let the matter rest where it is. It is not a question that interests the general reader, and no good will be accomplished by continuing it. We are more convinced than ever, that personal controversies relating to business matters, when carried to any length through the columns of a public print, are not only in bad taste but frequently give rise to damaging impressions. We shall endeavor to discourage this class of correspondence as much as possible hereafter.

Bee-Keepers' Associations.

It is exceedingly gratifying to observe the perfection of the bee-keepers' organizations in Utah, and many old States, with much greater pretensions in an apicultural point of view, could study and adopt their system with great profit. It will be seen there is a Territorial or head organization, with its President and general officers. Tributary to this are District or County Societies, each with its President and Bee Commissioner, and these make it a special business to inform themselves of the number of colonies in their respective districts, their condition, and the manner of treatment and care of bees, and success. They are also clothed with arbitrary power regarding foul-brood and other contagious diseases, and report all matters of general interest to the Territorial Association. By this system of thorough organization, all data bearing upon the production, condition, treatment, and prospects are easily arrived at, and the most practicable system of co-operation can be determined upon and effectively practiced.

The Irish Bee-Keepers' Association have adopted as its standard frame the same size as that of the British Association, and adopted a "resolution in favor of a journal exclusively for bee-keepers, and independent of trade influences, and promising to support such a journal if brought out under proper management." So says the London *Horticultural Journal*.

Our new location, 925 West Madison street, is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.



MISCELLANEOUS.

Honey Shows.—The *Northwestern Farmer and Dairyman*, of Portland, Oregon, remarks as follows:

The Irish Bee-Keepers' Association is to have space at the Royal Dublin Spring Cattle Show. Lectures will be given and, if the weather is propitious, the actual manipulation of bees will be freely shown by skilled apiarists. It will be a brief session of an aparian school. And the *Prairie Farmer* well says: "Why cannot American bee-keepers take a hint from this and increase the value and interest of the bee and honey exhibits at our annual fairs? The bee-keepers should have a tent or building to themselves, where they can show their hives and other devices to good advantage, and where they can lecture, talk and instruct each other and the people in general, in bee handling and care."

In thus conducting the bee exhibit a great interest would be created and bee-keeping materially extended. This interest is too greatly neglected in this northwest, though Oregon and Washington are eminently well provided for successful bee-keeping, and there is no good reason why nearly all our honey should come from California.

The Weather and Feeding.—The *Indiana Farmer* remarks as follows on the weather, fruit bloom, etc.:

The cool and unfavorable weather of the past few weeks has been quite detrimental to the bees. Very little honey was gathered from the fruit bloom. Many colonies will be short of stores, and must be fed to keep from starving, or if not so bad as that, they may entirely suspend brood rearing, losing weeks of valuable time. We are feeding our entire apiary of 150 colonies. It is not necessary to make syrup with which to feed, by boiling. Neither is it desirable that it be made thick. Sweetened water is all that is required at this season of the year. We simply fill a large extractor with water; scoop in sufficient sugar to make it sweet, stir until the sugar is dissolved and drawn off into the feeders.

The Crafty Bee and its Sting.—The *Boston Journal* tells the following story concerning the sagacity of a bee:

A certain restaurant in this city, apparently to proclaim the unlimited resources of its cuisine, has in its show-window a huge tank wherein glittering gold fish, sullen horned pouts, dignified bull-frogs and sprawling turtles dwell together in a greater or less degree of amity. The other day a bee fell into the water and was solemnly

gobbled by a goggled-eyed fish. Hardly had the bee been engulfed, however, when the fish was seen to be strangely excited. He leaped into the air, drew in great volumes of water and blew them out again, and acted so insanely that the turtles scuttled away in hot haste, and the frogs tumbled off the rocks to right and left in sheer consternation. Meanwhile the bee reappeared and crawled out of the tank in safety, evidently congratulating itself, as it dried its wings, upon its possession of a sting, and the presence of mind necessary to use it to advantage in an emergency.

Introduction of Italian Bees into England.—The *British Bee-Keepers' Guide Book* gives the following as a scrap of history:

ITALIAN BEES.—This variety, sometimes called Ligurian, was introduced into this country in 1859 by Mr. Woodbury, of Exeter, from a small district amid the Alps, including portions of Switzerland and Northern Italy, where it is indigenous. Much prejudice existed against them at first, but now their superiority over the common black bees is almost universally admitted. The Italian bee is similar in form and size to the black bee, but lighter in color, and has three distinct yellow rings about the body below the wings. It is more prolific than the black bee, more active, working earlier and later, increases much more rapidly, is ready for swarming earlier, and gathers honey from plants which are not frequented by the black bee. Pure Italians are also of a more amiable disposition, and less inclined to sting, therefore they are easier handled. The introduction of Italian bees has done much to improve our race of black bees, by introducing new blood and correcting to a great extent the mischief which had inevitably resulted from long in-and-in breeding.

The Honey Prospect.—Mr. L. R. Jackson gives his views on this subject in the *Indiana Farmer* in the following language:

The prospects for a good honey crop are unusually good in this section of the country. The cold weather during fruit bloom has prevented the bees from storing the usual amount of surplus honey, but at the same time it has kept the trees in bloom, twice the usual length of time and the bees have been able to gather plenty of the nectar, to keep brood rearing actively going on and I have never seen bees build up as much during fruit bloom as they have this spring. The white clover never looked better and it will be fully two weeks earlier than common. The mild winter with but little freezing and thaws has left the roots of clover and other flowers in a healthy condition. Basswood is almost sure to be good, and with us that is better for surplus honey than all other bloom, it being so plentiful and so sure to give a surplus.



For the American Bee Journal.

Care of Comb Honey—No. 1.

G. M. DOOLITTLE.

As I intimated at the start when commencing these articles, that I would take up the text under the different heads: "Production, Care, and Sale," separately, so having spoken of production, my next or second part will be care. At the outset I wish to say that many seem to suppose that the producing part is about all there is to any branch of business, which supplies our markets with merchandise. How often we find butter, wool, maple sugar, etc., taken to market in such poor shape that it does not bring as much, within 20 per cent., as goods of no better quality are selling for, where the producer understands that the placing of his product upon the markets in attractive shape, has much to do with the value thereof. It is said that Mr. Durand, an extensive strawberry propagator in New Jersey, always finds a ready sale for his choice strawberries at a very high figure, while those of shiftless producers spoil on the markets without a purchaser. Thus, Mr. Durand obtains more money from his few rows of choice fruit put upon the market in attractive shape, than is obtained from as many acres grown in a slipshod manner, and sent to market by shiftless parties. Honey is no exception to this rule, unless it is that the difference is still greater than on most other productions.

Hence, to place our honey upon the market in the best possible shape should be the aim of every bee-keeper in the land. My aim has always been, not only to get the honey off the hives before it was soiled by the bees, as I stated in the production part of these articles, but also to keep the combs as nice and perfect till they were placed upon the market, as they were when first taken from the hive. This is no easy task, for from the first, honey is liable to accidents which, if they occur, soon reduces the price from $\frac{1}{2}$ to $\frac{1}{3}$.

I once hired a man to help me remove honey from the hive, as I was nearly sick and unable to keep even with my work as I desired to, but after his working with me half a day I so improved in health that his assistance was no longer necessary. He would manage to get his fingers against the honey so as to break the nice cappings to nearly every box, in spite of all I could do, and if he did not do that he would get the corner of one box into the face side of the comb in some of the other boxes, and I actually believe I paid him 75 cents for doing me \$10 damage. Where a person is naturally sensitive, such proceedings will cure slight sickness

quicker than a physician can. I only give this illustration to impress on the minds of the readers that the utmost care is necessary at all times in handling section boxes of honey.

The first requisite in caring for our honey after it is taken from the hives is a good room in which to store it. Years ago it used to be the custom to store honey in the cellar to keep it cool, but I believe all of our practical bee-keepers of to-day prefer a warm room to a cool one, on account of the honey sweating, or taking on dampness in a cool room, thus giving it a watery appearance. If left for a great length of time in such a place the honey will often become so damp and thin as to burst the sealing, and leak badly as well as to sour. While in New York, in 1877, I saw in a damp cellar several hundred pounds that had become thus damp and thin. It had run down the sides of the crates and over the floor, where it had soured, making it smell badly and look equally bad. To avoid an occurrence like this our honey should be stored in a dry, warm room, and be so piled up that the air can circulate freely all around it.

In visiting some of our extensive comb honey producers here in the east, I found them carrying their honey up a flight of stairs to the chamber of the house or workshop, that they might get the heat produced by the sun shining on the roof. Now, while this gave all that was necessary in the shape of a honey room, it also gave a large amount of extra work which I consider as unnecessary.

I use a room 7x10 feet, in the southwest corner of my shop, having the outside painted a dark color, so that the rays of the afternoon sun will make the room as warm as possible. As a body of honey, once thoroughly warmed, will hold the heat for a long time, the average temperature of this room will be pretty high, ranging from 80° to 100° most of the time, thus ripening the honey so that in a month's time it can be handled as you please and not a drop of honey will leak, even from the few uncapped cells the bees always leave around the edge of the box.

To secure a free circulation of air, as honey will take on dampness even in a warm room if the air is partially excluded from it, I build a platform of scantling a foot from the floor, and six inches out from the wall, upon which I pile the filled sections, keeping them in the same position they occupied while standing on the hive. On warm days raise the windows on each side of the room, so as to admit all the fresh, dry air possible, and as it comes toward evening close them again. To prevent robbers coming in, and also to let the few bees that may come in on the honey out, I cover the window (tacking it to the casing outside) with wire-cloth, letting it go above the casing nearly a foot at the top, and keeping it out from the building $\frac{1}{2}$ inch by means of strips of that thickness tacked to the outside of the shop, and running up and down the side. Thus, all bees from the inside crawl to the top above the win-

dow where they find an outlet, while the robbers are intent on getting through the wire-cloth where they can see and smell the honey, as their instinct is not equal to showing them that by going above the window a foot, and down behind the wire-cloth they could get the tempting sweet. So they are kept outside where you wish them by this simple device, while the climbing instinct of those inside enables them to get out, thus keeping your room clear of bees.

My next will be how to detect the work of the moth-worm when it first hatches, and how to head them off if troublesome.

Borodino, N. Y.

For the American Bee Journal.

Reply to Mr. Clarke.

JAMES HEDDON.

I wish to assure Mr. Clarke that I have no ill feeling toward him or any other bee-keeper; that I admire his terse and scholarly writings. In our views on practical apiculture we differ; that is best, perhaps. Of Mr. Clarke's practical knowledge of apiculture, I have never been able to learn much. I presume I was wrong in my use of the more belligerent term "attack," when I meant simply "criticism." I stand thankfully corrected. I ask to be excused for this literary mistake, having had far less chance to become proficient in this direction than the Rev. Mr. Clarke or Prof. Cook, having made honey producing a specialty since my youth, and have had to stick very closely thereto, to support my family and "get on in the world."

Mr. Clarke, do you not frequently read facts in the BEE JOURNAL, where experiments have been made especially to test the pollen theory, which indicate that pollen is one of, if not the chief trouble. I have many private letters upon the subject, all favoring that theory. Among them I call to mind Dr. A. B. Mason's, of Wagon Works, O., and Walter Harnes', of Manistee, Mich. There are many more, but I depend upon memory only. Referring to my religious views, and that, too, where it has no bearing upon the subject under consideration, I think myself is "questionable" in its "propriety." I mentioned it as I did to illustrate the point that Mr. D. and many others believed things implicitly, where there were no living "witnesses that he could cross-examine." I thank you, Mr. Clarke, for wishing that I believed a something, the same as you do, and I trust that you do not hold to the ancient custom of convincing me by a little screw applied to my thumbs.

But, really, has not the time gone by when you can satisfactorily answer a man's argument by pointing at what you think to be a hole in his coat? Perhaps I think more of science, and less of the supernatural than you do, because of our labors with and incomes derived from these sources. Whether "Thomas" doubted or not, honesty was always the best policy,

and always will be. The way "we" agree so nicely in our opinions in regard to apiculture here, is because "we," the family and 3 apprentices, are numerous enough to hold daily Bee Conventions, and when we differ, we just discuss the subject till we agree, if possible, and upon points that we do not agree, I do not say "we" think so. Now, you have not said any unkind things of me, that I know of. I do not consider sarcasm unkindness, any more than it is logic. I rather like "smart" hits, and would rather they would hit me than to never be shot. I smoke the pipe of peace with you, and if you will drop in upon me some time, I will convince you that my stomach is not sour—not not acid—not even bacterious.

Dowagiac, Mich.

For the American Bee Journal.

Wintering Bees in Clamps.

W. Z. HUTCHINSON.

About a year ago an article appeared in the BEE JOURNAL upon the above subject, by Mr. C. J. Robinson. I was very much interested in the matter, and, after some correspondence with Mr. R., I decided to give this method of wintering a trial.

Learning that dampness was one great foe to success, I selected a dry, sandy knoll as a site for my clamps. I use the word in the plural, because I buried bees in two pits, in order that I might open one early and the other late, and note the difference in the condition of the bees.

In burying the bees, I first dug a trench two feet wide at the top, and two feet deep. This trench was filled with dry straw, then pieces of scantling were laid across the trench, and the hives set over the trench upon these pieces of scantling. With rails and pieces of rails a pen was built around the hives, and the space between hives and rails, which was about one foot, was filled with dry straw. The pen was built about a foot higher than the tops of the hives, the tops of the hives were covered with straw to the depth of one foot, and then the straw was covered with rails, the ends of the rails resting upon the outside pen. The sides of the pen were built slightly sloping, so that the top of the pen was smaller than the bottom. The pen was covered upon the outside with about a foot of straw, and then the whole was covered with earth to the depth of about 18 inches.

On Nov. 15, four colonies were buried in one clamp, and six in another. No openings were left for ventilation, and, during the past winter, I was obliged to "tell about those bees" until it really became tiresome. "What! don't you give them any air?" "No, only what was in there when they were buried, and what little finds its way through the earth." "Why! they'll smother won't they?" "No, I think not." "Well, I wouldn't give you much for them," etc.

I selected the lightest colonies, as Mr. Robinson said that he thought

that they wintered better in clamps than did strong colonies. The lightest colony did not cover three combs, while the heaviest covered six combs.

One clamp was opened April 1st, and the bees were found in fine condition. There were but few dead bees, scarcely any honey consumed, the bees very quiet with no signs of dysentery, no moldy combs, and the straw so dry and sweet that the cow ate it readily. The other clamp was opened April 17th, and the bees found in the same condition as in the other clamp, except that the lightest colony was dead, for which I can give no reason, unless it was because there were so few bees. With the exception of this one colony, the bees appeared to be in about the same condition as when placed in the clamps—as though they had slept only over night, instead of over five months, as some of them had.

This experiment helps to confirm my belief that, if properly managed, bees can be successfully wintered without carrying them out, in the winter, for a "fly."

I have been so successful in this attempt at wintering bees in clamps, that I shall try it again next winter upon a larger scale. If I remember rightly, Mr. Robinson has, for several years, wintered his light colonies in this manner, and wintered them successfully, too. I wish to thank Mr. Robinson and the BEE JOURNAL for information upon this subject.

Rogersville, Mich.

For the American Bee Journal.

Fastening Foundation in Sections.

L. JAMES.

On page 227 of the current volume of the BEE JOURNAL is an article by Dr. Miller upon the above subject, and its perusal as well as many others that have appeared at various times in the JOURNAL, leads me to believe that it is not known generally among the fraternity how easy a thing it is to fasten either foundation or combs in frames or boxes, that will remain just where you put them. And if the Doctor or Mr. Doolittle will give it a fair trial, I think the former will have no further "trouble in having it dropping out of sections just at the most annoying time when honey is coming in with a rush," and that the latter will lay aside his hot iron.

In practice it is simple, and the foundation can be inserted rapidly and securely. I will give to the fraternity my method of fastening starters of combs in surplus boxes, or whole sheets of bee combs in frames for the body of the hive for the past 15 or 20 years, with entire satisfaction, and I find it answers equally well in securing foundation in place. To hold the foundation in the frame (or section if that name is more expressive) conveniently for fastening it there, I make what I shall call a support, as follows: Take a piece of 3-16 inch board (a piece of cigar box I prefer) and cut it $\frac{1}{4}$ inch less on all sides than the inside of the section.

On one side of this piece and flush with the edge nail a strip $\frac{3}{4}$ or $\frac{1}{2}$ inch thick, and the same in length, and wide enough to project $\frac{1}{4}$ inch beyond the side of the top-bar of the frame, when the opposite side of the support is a trifle less than half way through the section (less the thickness of the foundation). To the lower outside edge of this $\frac{3}{4}$ inch strip nail a piece $\frac{1}{8}$ inch thick, $\frac{1}{4}$ inch wide and of the same length to gauge the exact distance the support will stand in the section so as to hold the foundation centrally in the section. Cut the top and one side of the foundation at right angles to each other so that it will come in close contact with the top-bar and one side of the section. Turn the section upside down and clap the support inside with the thumb placed on the $\frac{3}{4}$ inch strip and the fingers on the outside of the top-bar holding it securely in place, lay in the foundation carefully so as to have the straight edges fit nicely to the top-bar and side. This will prevent the melted cement from running under it. Tip the section a little to one side to prevent the foundation from falling out. To fasten it hold the frame in such a position as to have one of the straight edges at a suitable angle for the melted cement to run quickly down its edge to the corner of the section, if there is a surplus of it, by adroitly turning the section allow it to traverse on down the other straight edge of the foundation. It is not advisable to pour on too much at first, but after it has started down to keep dropping it from the spoon upon the descending current as it shows signs of stopping. Some practice and care is needed to keep the cement at a proper temperature; if too hot it will melt the foundation, and if too cool it will not flow fast enough to make a neat job. It requires but little cement to hold the foundation firmly in its place, and all beyond this is worse than useless. A little practice will enable the operator to hold the frame in a proper position to have the cement travel quickly along in its course so as not to have it spread too much on either the foundation or frame. If, however, too much has been used, or dropped on the frame, I find a table knife with the blade broken off so as to leave it an inch long on the back and half an inch longer on the cutting edge, giving it an acute angle (most conveniently done by grinding), a convenient tool to remove the superfluous cement. With the thumb placed on one side of the blade to act as a gauge it can quickly be removed if attended to before it becomes too cool.

The cement I use is made by melting together in my wax cup three parts of clean bees wax and one of clear, clean rosin, well incorporated by stirring after they are melted. The quantities are by bulk, and as near their proportions as I can guess, as it is added from time to time as I need it.

The best thing I have found for applying the cement with is a thin teaspoon with the point of the bowl drawn out to a narrow pitcher mouth shape, by hammering; I also find the

feather end of a goose quill, that is a little dish or spoon shaped, properly trimmed, quite useful on many occasions to touch up and finish any little imperfection that may have occurred in inserting the foundation, or in closing openings between the glass and box where the former happens to be too small to make a good fit.

While upon this subject I will give a description of my wax cup that may be of advantage to beginners—the old ones know all about it. It is a tin cup 5 inches in diameter, $2\frac{1}{2}$ inches deep, with a small lip soldered on one side, for the convenience of pouring the cement when wishing to clean out the cup. A strip of tin $1\frac{1}{2}$ inches wide crosses the cup and is riveted at either end to the sides of the cup, so as to stand $\frac{3}{4}$ of an inch above the top of the cup, with a circular piece cut out of the upper edge to correspond in a measure with the convexity of the bottom of the spoon, to readily clean off the drop of cement from the bottom of it as it is drawn through this depression, and conveyed back into the cup.

Atlanta, Ill., May 3, 1882.

Texas Agricultural Journal.

Bee Forage of Southern Texas.

THOS. D. LEONARD.

Honey is strictly a production of the vegetable kingdom, and in most cases is confined to flowers. All flowers do not produce honey. Some produce pollen (bee bread) only, while others produce both pollen and honey. Honey is secreted by minute glands, contained in small cups called nectaries at the base of the stamens, and also exudes from the leaves and stems of many plants. It consequently partakes more or less of the flavor of the flower that produces it. The God who created both bees and flowers made both in harmony with each other.

The sweet nectar is supplied by the flowers in a crude state, and consequently needs to be analyzed and refined. The bee is guided by its God-given instinct to select what she chooses and reject any and all impurities not consistent with her choice. Physically she is prepared for this work, and also possesses an extraordinary instinct, to guide her where and when and how to find honey or pollen when it exists even in the smallest quantities, and at its earliest appearance.

We have about fifteen varieties of trees that may be classed good and best honey producers, to wit: The peach is earliest to bloom; there are several varieties of haw which begin to bloom early in March and continue to April—it is valuable for brood-raising; red-bud is early and very good; hackberry, holly and prickly ash are good; wild peach may be classed first-best and blooms in April, and sweet bay may be classed with it but blooms later; youpon and huckleberry are very good and begin last of April and continue 3 or 4 weeks; dew berry is valuable and

blooms early; grape and raton are the best vines, yet all the vines we have are good—nothing we have excels raton and linden. The spring harvest closes with the linden. When it blooms, from the 15th of May to the 20th of June, we have our best flow of honey, so have your colonies in good condition for harvesting. The wild mulberry comes in bloom in June and lasts several weeks. The horsemint comes in bloom in May and continues four or five weeks. Goldenrod and boneset bloom in September and October—both are very good for winter honey. Corn and cotton afford some honey; melons afford honey; the white-flowered thistle is very good and lasts several weeks. There are several other trees and plants that produce honey. If you have bees, and will give attention, you will soon learn all they work on in your locality.

All the above named trees, vines and plants do not exist in any one locality; consequently, as they bloom at different periods, and none last more than 2 or 4 weeks, there may be gaps of 10 or 20 days in many localities, which would be detrimental to the bees. A 4 or 6 weeks drought at any time would seriously affect the honey crop. Too much rain is also disastrous. Any locality can be improved by selecting and planting such plants as will fill up the gaps that may exist. Such should be selected as might be planted on waste lands, old fields, road sides, banks of streams, hedges, etc. I do not think it will pay to plant anything that requires cultivation for honey alone. All the hedges that I have seen afford honey-producing flowers. Wild peach will pay planted for groves or shade. So will linden.

We have honey-dew some years in some localities. It is the product of an insect. It is not fine flavored but answers for brood-raising and winter honey. I have seen the insect in millions, and the honey dripping from the leaves of the trees.

Howth Station, Texas.

Home Science Gossip.

Shading for Bee Hives.

F. L. WRIGHT.

While all agree as to the propriety of shading hives from the hot sun of midsummer, all do not agree as to the method of shading. Without doubt the best shade for hives never has been thought of. Each has his pet method, such as grape vines, raspberries, hops, tomatoes trained on a trellis, evergreen trees closely sheared on one side, etc. By far the greater part prefer the first mentioned, viz: grape vines. This being our preference we will try to give you a short chapter on planting and caring for vines, and in our next will return to our subject.

A vine should be planted on the south side of every stand. Select some good salable variety, and one known to do well in your locality. For South I would recommend Martha, Ives, Concord and some of the best

Æstivatis class such as Herbemont, etc. For the West only such hardy sorts as Janesville, Clinton and Taylor of the *Ripirari* class, and the hardiest of the *Labruscas*. For the States east of Lake Michigan all of the best varieties of *Lab* and the hardiest hybrids will be found more satisfactory than the extra hardy varieties required for the West and Northwest.

Select good, strong one-year old vines, which can be had at a very low price,—cut back the tops to two or three buds, and the roots one-third. Dig a hole large enough to take in all the roots without having any two cross each other, and 18 inches or two feet deep. Fill up the hole to within 6 or 8 inches of the top with surface soil in which has been mixed some bones, wood ashes, charcoal, etc.; on this plant the vine, spreading out all the roots, and then fill up with fine surface soil packing closely and firmly.

As soon as the shoots have grown a few inches rub off all but the strongest one. A good stake should be driven firmly by the side of the vine and the vine should from time to time be tied to this, which will be all the support needed for the first two years. As soon as the young shoot has reached the top of the stake (which should be 4 feet high), the end should be pinched off which will cause it to throw out laterals, thus making all the more shade. At the end of the first season if the vine has made a good growth, you should cut it back to within 2 feet of the ground, and the next season allow but two of the strongest shoots to grow. These should be trained to the stake as before, only allow them to grow beyond its top and hang partially over the hive. At the end of the second season cut back to about the top of the stake. After this you will need a trellis of some kind. The one we give preference is known as the Caywood overhead vine trellis. It is constructed as follows: Set a good, sound oak or cedar post by the side of every vine, letting it extend out of the ground $6\frac{1}{2}$ feet. On the top of this spike 2x2 scantling 3 feet long, making a cross. On the top of this stretch 4 wires (No. 14) from one end to the other of the row of vines fastening them securely 12 inches apart on the scantling, thus making an arbor that, when covered with vines, will give good shade in the middle of the day, when most needed. The vines are also over head entirely out of the way, as the vines are simply taken up the post and allowed to extend along the wires, and if any grow off and hang down, simply throw them up over the wires. A very fair shade can be made with raspberries by simply allowing but 3 or 4 canes to grow, and, as soon as they reach the height of 4 feet, pinch off the ends which will cause them to throw out branches or laterals. These also should be pinched as soon as they grow a foot or so. If treated in this way they make a stocky growth and yield large quantities of extra fine fruit.

There are many other things used for shade with good results, but let me

caution you not to place them under large trees where they cannot receive the direct rays of the morning and evening sun. Hives in such localities are in damp times subject to fungoid growth, soon rot and combs often mold.

Plainfield, Mich.

Scientific News.

The Functions of the Queen Bee.

PROF. C. F. KROEH.

Some of the most surprising facts concerning the queen bee still remain to be mentioned. As there are three kinds of bees in the hive, we should naturally look for three kinds of eggs for them to hatch from; but the queen lays only two kinds. There can be no doubt as to the identity of the eggs from which queens and workers spring. We have waited until worker eggs hatched into tiny grubs, and then transferred these into cells which a queenless colony had enlarged to rear queens. Others have tried the same experiment, and the result uniformly has been that these larvae hatched out into queens.

It still remains for us, however, to account for the manner in which the queen lays two kinds of eggs after her fertilization. That a healthy queen knows what kind of an egg she is about to lay, and that she has the power of regulating its sex, is evident from the fact that she puts the egg in a cell of the proper dimensions, laying worker eggs in cells one-fifth of an inch, and drone eggs in cells one-fourth of an inch in diameter, without making any mistakes. The microscope has partly solved the mystery. The ovary of the queen consists of two lobes emptying into a common duct, just below the entrance of which there is a small vesicle, called the spermatheca, which Hunter, in 1792, proved to be filled with the seminal fluid of the drone when copulation takes place, and Leukardt estimates that this fluid contains about twenty-five millions of spermatozoa. Now, when the queen lays an egg, she may or may not compress the spermatheca at the moment the egg passes it; if she does, two or three spermatozoa find their way into it, and the result is a worker egg; if she does not, the egg remains unimpregnated and hatches out a drone. Siebold found from one to three spermatozoa in every worker egg, but none at all in drone eggs; and Donhoff reared a worker from a drone egg which he had artificially impregnated as soon as it was laid.

It was stated above that the microscope solved the mystery but partially; for it is contrary to our common experience that unimpregnated eggs should hatch at all. If hens, for example, are kept by themselves, they will continue to lay eggs; but these eggs will never hatch. Nevertheless, the evidence in the case of the queen bee does not admit of a reasonable doubt. In 1845, Dzierzon found the true interpretation of the observation so frequently made, that some queens

lay nothing but drone eggs. If a queen hatches out crippled, so as to be unable to fly, she will never be fertilized. If she is prevented by bad weather or other causes from flying out to meet a drone for a period of about three weeks after hatching, she is no longer capable of fertilization, probably by reason of a change in her organs of generation. In either case she will lay eggs that will hatch drones only. As queens grow older, their supply of spermatozoa, copious as it is, gradually dwindles down, and they will lay more and more drone eggs in proportion to the number of worker eggs. Indeed, the supply is liable at any time to become exhausted, and the brood will then consist solely of drones. Queens of the three kinds mentioned have been repeatedly dissected under the microscope, and in every case the spermatheca was found to be devoid of spermatozoa. As it is manifestly to the disadvantage of the bee-keeper to raise a large number of drones, which are consumers only and not producers, he remorselessly dispatches all drone-laying queens and replaces them by young fertile ones. As a rule it does not pay to keep a queen longer than three years.

So far as we know, a single fertilization lasts a queen for life. Instances have been reported now and then that a queen had left her hive for a second mating, but owing to the extreme difficulty of verifying observations of this kind, they cannot be accepted as facts until further evidence accumulates.

A healthy queen not only knows in advance the sex of the eggs she is going to lay, but she proportions their number to the wants of the colony. If the weather is cool, or the colony so weak that it cannot produce heat enough to hatch much brood, or if there is scarcity of honey, she will lay but few eggs. She deposits them, moreover, in contiguous cells, and after having laid a patch on one side of the comb, she crosses over on the other side and lays in the cells exactly opposite, so as to economize the heat of the cluster. In the height of the season, when an abundance of honey is brought into the hive, the development of eggs in her ovary is proportionally great. Then it often happens that she is pressed for room, all the cells being occupied by stores or brood. As she is obliged to lay the eggs as fast as they come to maturity, she sometimes lays two in one cell, one of them being then removed by the workers; or else she simply drops them. Langstroth states that the workers in that case often make a meal of them, and admire the self-control they must exercise upon other occasions in abstaining from dining upon eggs when they are not plenty.

The queen eats honey herself, but she is also fed by the workers, probably with partly digested honey and pollen. It is quite likely that the amount of the food thus offered her regulates the maturing of eggs in her ovary. When the workers collect an abundance of stores, they feed her

liberally, and she then lays a large number of eggs; but when stores are scant they do not stimulate her so much. Before dismissing this portion of the subject, it may be well to caution the reader not to allow his imagination to be captivated by the word queen to such an extent as to assign to her mentally the prerogatives of royalty. Some writers go so far as to picture her constantly surrounded by a respectful circle of subjects, waiting upon her majesty, and ready to carry her commands to every part of the colony. It appears, on the contrary, that the regulation of the affairs of the hive belongs not to her, but to the workers. They decide when to swarm, how much comb to build, and how much brood to rear. They determine when to raise new queens, probably transferring eggs into queen cells, and they protect them from the jealousy of the old queen. It seems as though the sole function of the queen is to lay eggs.

Stevens' Institute of Technology.

CLUBBING LIST.

We supply the Weekly American Bee Journal and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

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Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of 2,—a copy of "Bees and Honey."	
" " 3,—an Emerson Binder for 1882.	
" " 4,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.	
" " 5,—" " cloth.	
" " 6,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.	

Or they may deduct 10 per cent in cash for their labor in getting up the club.

☞ "Pot-Bouille," Emile Zola's new book, is creating a greater sensation in Paris than either "Nana," or "L'Assommoir." 30,000 copies of it having been sold in Paris on the first day of its publication, and the American edition is published this day by T. B. Peterson & Brothers, Philadelphia, in a large square duodecimo volume, uniform with "Nana" and "L'Assommoir," and is for sale by all Booksellers, and at all News Stands, and on all Railroad Trains. "Pot-Bouille" is intensely interesting, and is a faithful picture of the manners and morals of the Parisian middle classes.



Local Convention Directory.

1882. *Time and Place of Meeting.*
 May 11—Champlain Valley, at Middlebury, Vt.
 T. Brookins, Sec., East Shoreham, Vt.
 16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
 Jonathan Stewart, Sec., Rock City, Ill.
 25—Iowa Central, at Winterset, Iowa.
 Henry Wallace, Sec.
 June 3—Hart County, Ky., at Woodsonville, Ky.
 Oct. 5—Kentucky Union, at Shelbyville, Ky.
 G. W. Demaree, Sec., Christiansburg, Ky.
 Tuscarawas Valley, at Newcomerstown, O.
 J. A. Bucklew, Sec., Clarks, O.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Salt Lake Herald.

Utah Bee-Keepers' Convention.

The Territorial Bee-Keepers' Association assembled at Salt Lake City, April 6, 1882, President A. M. Musser presiding.

Letters were read from various parts of the Territory. Mrs. Annie C. Woodberry, of St. George, writes that in the spring of 1881 she had 45 colonies, increased to 51, lost 5 during the summer, leaving 46 in good condition; had taken 2,200 lbs. of honey, mostly from top boxes.

Mr. John Price, of Washington, writes March 26, 1882: Six years ago I began bee-keeping with one colony, and now I have 88 colonies of bees in good condition; have lost 6 by bee moths; no foul brood in this place. There are 175 colonies of bees in Washington; no trouble wintering on summer stands, with shed roofs to shield them from our hot Dixie sun. We average 75 lbs. of honey to each colony, but I have taken 162½ lbs. from one.

Mr. Silas Richards, of Union, writes March 27, that they have 11 bee-keepers there, had 67 colonies, but have lost 12, leaving a balance of 55 this spring; winter on summer stands; generally practice natural swarming; do not use extractor, neither disturb the brood nest; use scarcely any bee veils or gloves.

Mr. Joseph E. Johnson, writes from St. George, March 31, 1882, that there are about 500 colonies in Washington, Kane and Iron Counties, yielding from 20 to 100 lbs. to the colony, honey varying from 15 to 25 cents per pound. The supply is equal to the demand. Not a single case of foul brood has been known in these parts. The best honey season there is during May and June. If there are late rains they have some fall bloom, and, as the winters are warm, bees fly nearly every day. Consequently, there is liability to about 25 per cent. loss by starvation, unless the bees are fed when the supplies are short.

President James Cullimore writes from Pleasant Grove, Utah County, that press of business prevents him

from giving a full report of the Association. He has 115 colonies, and has lost only one up to this time, wintered on summer stands. After so long a winter honey is scarce in the hives. Some in the neighborhood have lost but few, and others, none of their bees.

Mr. T. W. Lee says in Tooele City there are 16 bee-keepers, and 106 colonies of bees. They were put into winter quarters on summer stands. Losses 24, leaving 82 colonies in tolerably good condition. No foul brood. Bees are mostly hybrids.

Mr. Charles Connely says, as bee inspector, he had destroyed 21 colonies of foul brood in Box Elder County in one season; and on his return home expects to destroy others infected, and try to rid the county of this dreadful pest. He started with 2 colonies and now has 46. There are about 350 in the county. He wintered his bees on summer stands about 4 inches apart, filled with hay, chaff or straw. Gives upper ventilation, puts a cloth over the lower hive, keeps them dry and warm, and has no trouble in wintering. Honey sells there at 20 cents per pound.

Bee Inspector R. M. Birch, of Weber County, said he winters bees on summer stands in shed; puts cloth on lower hive and fills the upper box with hay. They winter well.

Bishop C. A. Madsen, of Gunnison, Sanpete County, said their bees, although but few in number, had wintered well, and as he learned more about bees his interest increased. Intended to progress in bee-culture in Gunnison.

Mr. N. T. Porter, of Davis County, said they had been sorely troubled with foul brood, and consequently heavy loss. He had lost his bees, but was starting again with better success. He had placed chopped feed near his hives and the bees worked wonderfully in it.

Vice President Samuel Mackey took pride in bee-keeping, and always had good success in wintering his bees, until this very hard winter when he had lost 56 out of 87 colonies. He thought the severe frosts had cracked some of the honey combs, and the damp of the hives had soured the honey, sickening and killing many of the bees; also, many of the bees had been lost in flight on warm days, thus weakening the colonies. Foul brood was imported into our country, and has spread fearfully in many places. It must be destroyed if we would be successful with bees. Most of his losses occurred in February. Thinks the loss in Salt Lake County will be over 50 per cent.

Mr. Wm. Egan said his experience had been quite different this winter from that of any previous year. He had only 5 colonies of bees left alive out of 40. For want of time he had neglected to pack his chaff hives last fall, hence his loss. Previously, when he had protected his bees, he lost scarcely any.

Edward Stevenson said we must provide better winter quarters for our bees in order to insure success, especially as our winters are so changeable

in this high altitude. He had placed some of his bees under shed roofs packed with chaff, with a movable front ten feet long and two feet wide, leaving four inches back and front, boxing the entrance, leaving a passage for the bees through the movable front. The hot rays of the sun will not so easily cause the bees to fly, until the air is sufficiently warm for them to return home again. This makes a cheap chaff hive, as six hives can be placed together in one packing, and be kept warm until late spring, thus inducing early brooding. They must have proper ventilation and chaff cushions in upper box. In Dixie scarcely any bees die because of the cold.

The meeting was well attended, and an increased desire to make Utah a success in bee-culture was manifested, that the land may flow with honey as it now does with milk.

Read before the Mahoning Valley Convention.

Pasturage or Forage for Bees.

LEONIDAS CARSON.

To every owner of an apiary, the most important question for consideration is a continuation of good pasturage or forage for bees, for on this rests all our profits. If we have not a succession of indigenous forage, we should plant to fill the vacancy. By indigenous, I mean those honey-producing plants and trees that are native, or produced natural in a country or climate.

If you have not the golden willow, procure it and plant, for it yields both pollen and honey in profusion, of a fine quality. For shade and timber plant the maple, which yields both pollen and honey. Next in season we have ground ivy, or Gill over the ground. Then the dandelion rears its golden head to gladden our little pets.

The occupation of horticulture and bee-keeping go hand-in-hand. The first fruit tree to bloom is the peach, then the pear, apple and cherry follow each other in rapid succession, yielding pollen and honey in rich profusion. Near or about this time the strawberry begins to bloom. The wild cherry commences to bloom and fills the gap between fruit bloom and white clover. Next we come to our main or most general forage plant, which, if not found in natural profusion, may be grown in all localities, viz: Dutch or white clover. This rarely fails to yield honey of the finest quality. Those bee-keepers who have low wet fields with a damp, heavy soil, should sow Alsike or Swedish clover, it being a greater honey-producer than white clover, and is second to no clover grown for hay, and it not pastured too short, will never run out. At or about this time we find the raspberry in bloom, yielding plenty of fine honey of a quality surpassed by none. I have never known a season when it failed to secrete honey. Therefore, to the lovers of this fine fruit I say, plant the raspberry. Next comes linden or basswood. Standing, as it does, first in

rank as a honey-producing tree of rapid growth and luxuriant foliage, it is truly a beautiful tree for shade. To every bee-keeper I would say, plant many linden trees. It will pay to plant the tulip tree, known in this locality as poplar or white-wood. The tulip tree is a good honey-producer, the flowers expand in succession, thus affording more time to the bees in which to gather the rich harvest. The tulip tree blooms when 10 years old. Those who own rough, broken or waste land, should try sweet or melilot clover. Sow it in fence corners and along the roads. This plant yields a delicious honey. Do not forget to sow cleome or Rocky Mountain bee plant. It yields rich honey in profusion. In the driest seasons it has never failed to secrete honey. The bees visit it from dawn till dark. It will pay to plant the figwort, often known as the Simpson honey plant. The pretty little ball-shaped flowers, with a lip somewhat like the pitcher plant, is usually found filled with honey.

Sow buckwheat of the silver-hull variety from the 26th of June to the 4th or 5th of July. This cereal upon fair soil will yield all the way from 10 to 25 bushels of seed per acre, and if the season is favorable, a bountiful supply of honey.

If you have no golden rod in your locality, get a few roots and plant them, especially if you live close to some stream where waste land is plenty. This, in some localities, furnishes the bulk of the great yield of fall honey. Last fall golden rod failed to secrete honey, on account of the dry weather. The aster is another fall-yielding honey plant. You may frequently find a half dozen varieties growing side by side.

There are many other plants and trees yielding honey, for instance, the box elder and catalpa. The last named would pay farmers to grow for timber, it being very lasting, and in its season is covered with honey yielding blossoms.

It will pay to plant the common locust both for timber and honey, and the honey locust for hedges and for the honey it produces. Plant catnip for honey.

I have only attempted to give a list of some of the most important honey-producing plants and trees. The most of which have a double value. Again I say, plant for a continual honey harvest.

Tuscarawas Valley, O., Convention.

The Tuscarawas Valley, O., Bee-Keepers' Association met at Coshocton, O., April 19, and was called to order by the President, who delivered his annual address.

No minutes were at hand, and a discussion ensued as to the propriety of striking out Guernsey and Muskingum Counties, these Counties having failed to be represented in the Convention. The motion was carried and the body will hereafter be known as the Tuscarawas Valley Bee-Keepers' Association, composed of Tuscarawas and Coshocton counties.

Moved and carried that all persons who are connected with this Convention and live in Muskingum and Guernsey Counties, can, if they wish, withdraw from the Convention and have their fees returned to them.

Election of officers: L. B. Wolfe, of Coshocton, was re-elected for President; J. B. Wolfe for Vice President; Joseph Love for Treasurer, and J. A. Bucklew for Secretary.

The following subjects were discussed: Which is the best mode of obtaining surplus honey, side or top storing? No conclusion.

Knowing that the bees will store more honey without the use of division boards, how can we prevent the queen from entering the surplus department? No conclusion.

What is best, natural or artificial swarming?

It is the opinion of this Convention, after hearing the experience of the members present and their modes of swarming, that artificial swarming is the best, "all things considered," if it is done intelligently.

Adjourned till 10 o'clock a. m. tomorrow.

The attendance in the morning being small, the morning was occupied in giving the experience of each other on different topics of interest to beekeepers, and a friendly and profitable chat was indulged in till noon.

AFTERNOON SESSION.

Which is the best, the black or Italian bee, and why?

J. A. Bucklew said his experience with Italians is, they are more docile to handle than the blacks. Lift a frame of them out of the hive and the bees tenaciously cling to their comb, the moving not disturbing them from their labors, but it is not so with the blacks; the moment you raise the frame they become greatly agitated, quit work and run off the frame thoroughly demoralized. An Italian queen is not the least disturbed by the removal of the frame, but continues to perform her duties. When a black queen is sought, she is not to be found, and seeks concealment in some nook or corner. The Italians are greater workers than the blacks, working later and earlier, going farther in search of honey, and guarding themselves better against robbers and the ravages of the bee moth.

How to make apiculture a success? Mr. L. B. Wolfe said to be successful, the keeper must be interested in his business, must study it, read and be informed as to how and when to do the needed work. Have the best bees, and movable frame hives.

Best mode to increase your colonies, and how to defeat the moth worm?

Divide colonies instead of allowing natural swarming.

Mr. Wolfe said, never allow the bees any more frames than they can cover, and contract their hives with division boards to suit the number of frames left with them. Be sure that the colony has a healthy, prolific queen, then the bees will take care of the moth worm.

Best mode of obtaining surplus honey to realize the greatest profits?

Estimates made by J. A. Bucklew, T. Wolfe and others on the product of one hive as a test, was as follows: Number of pounds of comb honey, 100; value, \$20; expense, \$2.45. Number of pounds of extracted honey, 500; value, \$50; expense, \$26.75.

Is it advisable to plant for bee pasture?

Opinions prevailed that it was highly necessary to plant something to bridge over the time between apple bloom and white clover, and between basswood bloom and fall flowers.

The next meeting of the Association will be held at Newcomerstown, on Friday, Oct. 6, 1882.

L. B. WOLFE, Pres.

J. A. BUCKLEW, Sec.

SELECTIONS FROM OUR LETTER BOX

Drone Trap.—Since my inquiry regarding a drone trap, I have invented one, to be placed at the entrance of the hive. The worker bees can get in and out of the trap, but the drones cannot get out of the hive without getting in the trap, and when in they cannot get out. I have just come in from my apiary, and found the trap half full of drones. By this trap I can catch all of the drones that I do not want my albino queens to mate with, or catch all but the albino drones. My bees are in good condition, wintered without the loss of any. Now for *Apis Americana*. No more worthless drones. L. A. LOWMASTER.

Belle Vernon, O.

Promising.—The season continues very cold here; weak colonies are suffering, but those that have wintered well are very strong and promising.

J. ANDERSON.

Tiverton, Ont., May 6, 1882.

Bees Doing Well in Wisconsin.—Bees are doing well, with plenty of dandelions, and the fruit trees nearly in blossom.

JOHN CORSCOT.

Madison, Wis., May 9, 1882.

Wintered Well.—Bees wintered well—strong and weak alike survived. It is still freezing almost every night, although fruit trees are trying to put forth their bloom.

C. H. RUE.

Manalapan, N. J., May 4, 1882.

Free Advertising.—I have a few words to say in reply to that correction in the BEE JOURNAL for Feb. 15, page 98. I think it was hardly fair to attribute all my complaints to that one mistake. The two words "lose" and "have" might be written to look alike, and I thought that was a mistake, but the omission of words, parts of sentences, and the name of the manufacturer of the winter hive (which did not change ideas, but made my preference for those hives much less conspicuous), made it apparent to me that there was a reason

for it not explained in the correction. If it is out of place to express one's preference for hives or anything else used in the apiary, giving the name of the inventor or manufacturer, then I will be more careful in the future in making out my reports.

MRS. A. M. SANDERS.
Sheridan, Mich., March 13, 1882.

[Inasmuch as it is admitted in the above letter that the words omitted "did not change the ideas," of course the only thing to complain of was the omission of advertising in the reading columns—a thing we aim to do at all times—but once in a while such advertising is so woven into the letter that it escapes our notice. So long as the hive was mentioned, for which the writer had preference, it was wholly unnecessary to give the name and address of the manufacturer; that would be simply an advertisement for which our columns are open at 20 cents per line, and against which our reading columns are closed, at any price. So there is nothing to complain of, and no excuse for writing to the manufacturers of the hive that we had made the omissions to injure it, etc. Had we inserted the free advertisement in our reading columns, our advertisers, who pay for such notices, would have had cause to complain. But now, no injustice has been done, and no one has any just grievance.—Ed.]

Waters Receded.—The water has fallen 5 feet; $\frac{1}{4}$ of the lands overflowed are planted; $\frac{1}{4}$ will be planted this week; $\frac{1}{4}$ will be planted before June, and the remaining $\frac{1}{4}$ will not be planted this year. Weather 60° to 80°, and cloudy; rain last night. Bees are doing but little this month; no swarming so far. We fertilize from a nucleus of drones, made with two frames of hatching drone brood and one frame of honey.

J. W. K. SHAW.
Loreauville, La., May 8, 1882.

Bees Doing Well.—I started with 50 colonies—have 120 now, all vigorous; have had no spring dwindling or any disease here. I have on a large lot of sections that are being filled rapidly. Those I offer for sale here are all nicely capped and white as snow, and are looked upon with great wonder. An old foggy said: "See what this country can do besides raising cotton, if we only had the sense to develop it." I have repressed swarming as much as possible, and shall always hereafter clip a wing of every queen, to prevent swarming as far as I can. I am hopeful of Southern bee-culture. Success to the BEE JOURNAL and Northern bee-keepers the present season.

OSCAR F. BLEDSOE.
Grenada, Miss., May 10, 1882.

Rubber for Bellows Smokers.—Seeing in the *Bee-Keepers' Exchange* an article giving experiments with rubber in the manufacture of smoker bellows, I thought you would be pleased to place before your readers further experiments with that article. To do this and to avoid the implication of interest in the matter (except for the benefit of bee-keepers), I mail to the BEE JOURNAL, this mail, two Bingham rubber bellows, which have been in steady use since May, 1880, for inspection. The thinner rubber has stood the test much the best, and has worked quick and easy all the time. The heavy rubber has cracked much the worse of the two, and worked slow and hard. They both began to crack the second season, and have grown worse all the time since. When I began the experiment, I saw that rubber had two good points for smoker material, viz: Careless bee-keepers would find that mice would not gnaw them, and that they would cost the manufacturer about two cents less apiece. To balance this, they would weigh more and perhaps have other fatal qualities. I was so well pleased with the thin rubber experiment the first season, that I contemplated putting rubber smokers on the market, and bought considerable material for that purpose, but lo! when cool spring management began, my much hoped-for rubber began to crack as you see, and no rubber smokers were offered for sale by me.

T. F. BINGHAM.
Abronía, Mich., May 8, 1882.

[The rubber bellows above referred to have come to hand, and both show evidence of much use. One only exhibits signs of cracking to any considerable extent, and even that is but little, if any, impaired for use. We do not believe, however, that they are at all superior to good leather, either in point of durability or effective work.—Ed.]

Wintering Bees.—I commenced last season with 2 colonies of bees—one black, the other Italian; reared 40 Italian queens, and increased to 9 colonies; bought 4 colonies of blacks in August, and Italianized them. In September we united the nuclei and commenced to feed coffee A sugar, and just before winter set in we cut two $\frac{1}{4}$ inch holes through each comb about two inches below top-bar of each frame, and then they had large quantities of pollen stored, about one-half of the cells being partly filled with pollen and finished with honey, and we estimated that each colony had about 15 pounds of honey and sugar syrup, and the cold weather came on before they had capped all of it. This has been a very hard winter for bees in this section, the losses being larger than a year ago, averaging about 50 per cent. We enclosed each hive in a separate house, with 5 inches space between the house and hive on the sides, and 3 inches on the bottom, made high enough to contain the hive with the sections on, and

covered with a good, tight roof. We next put new, clean burlaps on top of the frames, then had a frame 7 inches wide halved on the lower edge so that it will shut down over the top of the hive one-half of an inch with two pieces of burlaps between them; then we tacked a piece of clean burlaps on the bottom of this frame, leaving it slack enough so that the halving will go down over the hive, we then filled this with chaff and placed it on the hive; next we filled all the space between the hive and house with dry sawdust 3 inches above the bottom of the chaff box, put the roof on the house, and leave the entrance wide open all winter and see that it is kept clear, and let them remain on their summer stands, which is about 4 inches from the ground. By so doing we now rejoice with 13 colonies, all strong and healthy, and, strange to say, they had consumed nearly all of their large supply of pollen before they commenced to rear brood, with no injurious results. I think that a properly ventilated and protected hive is the most essential thing in safe wintering. Our houses cost about three dollars each, and they are ornamental as well as useful.

ISAAC HUTCHINS.
Wellington, Me., May 5, 1882.

Still Cold and Cheerless.—Our cold weather continues, and snow and frost is the order of the day here in what is called "cold Spofford," as that is the name of our town. The morning of the 2d of May found us with 2 inches of snow on the ground and a freezing wind from the northwest, while on the hills it was fair sleighing. The 30th of April (Sunday) was quite a warm day, and some pollen was brought in for the first, but the cold of the 2d killed the blossoms of the elms and soft maples which were opening. With the exception of April 30th, it has not been warm enough to open bee hives in a month. My best colonies have brood only in 3 frames, while the poorest have none at all. I am hoping for warm weather soon. If it does not come, the mild winter will have been of little benefit, for our bees might as well die from a cold winter as from a cold spring.

G. M. DOOLITTLE.
Borodino, N. Y., May 8, 1882.

Honey Harvest in Texas.—Bees are gathering honey rapidly from ratan. This harvest will connect with horse-mint, and if seasonable, will give us a constant flow of 60 days.

WM. R. HOWARD.
Kingston, Texas, May 3, 1882.

Wintered Successfully Again.—Bees have again come through all in excellent condition. This is now 9 winters in succession without loss by my system of chaff packing, of which I am the originator. Wintering successfully is settled with me; but how to prevent swarming is the great problem with me, if I run for box honey.

H. H. FLICK.
Lavansville, Pa.

Unusually Early.—The interest in bee-keeping is increasing fast and greatly. I had a very fine Italian swarm come out to-day. This is unusually soon for us. Please answer: 1. I have a large number of sections partly filled with honey, and others with thick and thin dry comb; is it advisable to put them on the hives to be filled? My bees do not fill thick combs satisfactorily.

E. C. JORDAN.

Stephenson's Depot, Va., May 5.

[Use the sections. Many make a point of having their section combs built out the previous season, for early use. Unless very bright and clear, first extract the honey from the partly filled sections. We have observed that bees rarely fill extra-thick combs as satisfactorily as the medium or thin ones. You can probably remedy this by shaving down the surface of the combs with a thin, very sharp knife.—ED.]

Excessive Swarming.—I am having a lively time with my bees now; they are swarming very fast. I had 30 colonies to start with, and they have increased by natural swarming to 56, and not half of them have swarmed yet. I have had as many as 6 swarms from one hive. Two escaped to the woods, because I could not attend to them in time, being so many out at one time. They are storing honey pretty fast, and I am in hopes they will stop swarming. I have been a constant reader of the BEE JOURNAL for several years and have noticed the views of some men as to pure Italians, hybrids, etc., and so far as I have experimented with bees, I find the cross of the Italians and blacks to be as good as any pure Italian for honey, and better for increase, though increase is not the thing for me now, for I cannot sell pure Italian bees, in a painted, movable frame hive, for \$5. They do not know how to keep bees unless they can go to the swamp and cut a hollow black-gum, and cut it off with an axe, and set it by the meat house, and let it stand till June, then take a lot of rags and a hammer and go for some honey, bee-bread, young bees, etc. They say to me, how do you have such luck with your bees? I tell them there is no such thing as luck, it is in management. I do wish I could induce the people here to get to paying some attention to them. I have done all I can to get some of them to take the BEE JOURNAL one year; but no, they say they are too poor. I am satisfied if I had time to give the proper attention to my bees, I could make more from them than any one man can in cotton. I want to ask a question or two to be answered in the next issue of the BEE JOURNAL: 1. Will a non-fertilized queen's drones mate with a virgin queen the same as any drone? 2. Will a drone from a half-breed queen be pure, that is, will a pure Italian queen mated with a black drone, produce pure Italian drones; if not, how can

the Dzierzon theory be true. Please answer the above as I am a seeker of knowledge in the bee line.

H. M. WILLIAMS.

Bowden, Ga., May 7, 1882.

[1. It is generally conceded they will.

2. The best authorities heretofore have been nearly unanimous in the opinion that if the queen herself is pure, the drones will also be pure. There are, however, some very intelligent dissenters from this view. Our observations and experiments on the two questions have not been satisfactory.—ED.]

Sweet Clover.—My pets are doing well. I had queens and drones flying the first day of May. They are very busy on the maples, which are in full bloom. I have two colonies that they are trying to rob, and there is some hard fighting on both sides. 1. Please tell me what to do to prevent their fighting, as I have tried everything I know of. Enclosed you will find a specimen of a very good bee plant. It blooms from the middle of June till late in the fall, has a small white blossom, is very fragrant, and grows by the roadside. 2. What is it?

F. A. GIBSON.

Racine, Wis., May 9, 1882.

[1. Close the entrance to the hive being robbed so but one bee can pass in or out at a time.

2. You have sent us a specimen of our favorite honey plant—sweet clover (*Melilotus alba*). All will recognize its value when they have become familiar with it.—ED.]

A Prolific Queen.—As I gave in my report last fall, perhaps I had better tell you what I am doing now—busy hiving bees, 1 to 5 swarms per day. I put up my 33d swarm to-day. My first swarm came out on the 25th of March, and now has 10 frames of brood and is ready to swarm. I have a colony of bees in my apiary that are rather a curiosity. The queen is a fine Cyprian mated with a German-Italian drone, that is a hybrid drone. She was raised November, 1880, and mated on the 6th of December, and began laying a few eggs on the 10th of the same month; was wintered in a three-frame nucleus, built up rapidly last year, and gave a nice surplus and a few frames of brood. They went into winter quarters in 1881 on 8 frames, with space left for two more frames, which they filled with comb, and on the first of March the 10 combs were full of brood, and I gave them a full story with 10 frames of foundation. By the first of April these were full of brood, and I added a third story with 5 frames of comb and 5 of foundation, and 4 of these are to-day full of brood, and eggs in three others—24 frames (standard Langstroth) almost solid brood. I extracted 12 lbs. of nice honey from the third story last week, and as long as the queen con-

tinues to lay as she has I will give her room; but I see our great honey plant, horsemint, is now beginning to bloom, and this army of bees will need more room soon. I never saw such demons; the smoke from a steam engine would hardly quiet the rascals; the moment the hive is opened at you they come. I prepare for them with gloves and veil, and work on as if they were my favorite Cyprians that behave so nicely. I have about 30 colonies of Cyprian bees in their purity, and a better bee never landed on the shores of America. I have had them in my apiary since August, 1880, and I know they are good. I started to tell you, I commenced operations this spring with 40 colonies; sold 32 colonies for \$231.60, and I now have 45 colonies, which I think will go up to 50 by natural swarming. I am now harvesting my early wheat, and will soon have cake and honey raised in 1882. B. F. CARROLL.

Dresden, Tex., May 1, 1882.

Bees in Utah.—I am well pleased with the BEE JOURNAL, and as an amateur in the bee business, I have received many valuable hints that would have been to my benefit last year. I had 3 colonies of bees last winter, but the winter has been the hardest we have had since this was a settlement, and many have lost heavily in bees. I lost all of mine; dysentery was the cause. This spring, seeing the advertisement in the JOURNAL of Paul Dunker, of Freeman, Mo., I sent for 2 colonies of Italian bees, which I received in first rate condition on the 17th of April, and it was 2 days after before I could let them out, owing to the snow storm then raging in this place. Since that time the bees have done well. Now we have the peach, apple, apricot, plums, cottonwood, and May flowers all in bloom. Bees are streaming in with pollen and honey. I find in one hive a queen cell started, and plenty of young brood and drones hatched out, and by all appearance will have to divide in a few days. Some of the hives are rather weak, but in general the bees of this settlement are doing nicely, with plenty of bloom—clover and lucerne. We have in the past attended to the milk, but now we are beginning to attend to the honey, and it will soon be as the Prophet has said, a land flowing with "milk and honey." JOHN DUNN.

Tooele City, Utah, May 6, 1882.

Well for Philadelphia.—A rousing big swarm to-day. How is that for latitude 40°? This swarm issued on the 4th, but as they were clustering it threatened to rain, and they returned to the hive.

F. HAHMAN, JR.

Philadelphia, Pa., May 8, 1882.

An Abundance of Bloom.—Bees are doing well in this locality so far this year. I had two fine colonies on the 5th inst. White clover is beginning to bloom and there is an abundance of it. ELVIN ARMSTRONG.

Jerseyville, Ill., May 8, 1882.

Rearing Queens.—In your advice to Mr. A. L. Conger, Earlville, Iowa, in regard to rearing queens, you say: "Now take out the frames one at a time from the hive removed; and shake and brush all the bees from the combs in front of the new hive, then replace the combs in the black colony and release the queen." Now, I want to know what the black colony is going to do for bees. I cannot understand that part of the instructions; the balance before is plain and simple. Please explain, so that a beginner like myself will know what to do. White clover and poplar are in their prime here now; about half my bees appear to be working on poplar, the other half on white clover. Mercury stands at 81° in the shade at 12 m. Bees are crowding out queens with honey. I am trying to get my neighbors to use frame hives and Italianize, which some are making preparations to do.

J. A. P. FANCHER.

Faucher's Mills, Tenn., May 4, 1882.

[In the confusion incident upon removing the black hive and lifting out the frames one at a time, you will find enough bees, young and old, will run down from the combs and remain in the old hive to perform maternal duties, and to these young bees will be added hourly as they emerge from the cells, which will each require but a few days to be duly qualified as nurses. One principal object in brushing the combs in front of the new hive, is to get a fair proportion of the younger bees, which have not done field work, in with the older bees, to do certain drudge-work which they can best perform.—ED.]

Bees Light.—I have concluded to report this morning, as I have just finished overhauling my bees, doubling up, feeding, etc. So far, the spring has been the most discouraging (except that of 1879) I have experienced in my bee-keeping—6 years last April. We have had an abundance of fruit bloom, but the weather has been so very unfavorable that our best colonies have consumed more than they gathered. To-day it is so cold and damp that the bees are not flying, except where they are aroused by feeding. Owing to the exceptionally poor fall of 1881, and our present weather, bees are in a miserable condition to make a good showing for the season. I am compelled to feed my 33 colonies until something "breaks loose" for them to work upon. Many of them have only about half the amount of brood they should have at this time, and it will take close care to have them all ready for white clover, which promises much better than last season. We hope to get a good yield from basswood, as it was almost a failure last year. If it were not for the weekly visits of the BEE JOURNAL, which gives fresh courage, I should feel rather blue at times.

S. A. SHUCK.

Bryant, Ill., May 6, 1882.

Bee-Keeping in Colorado.—Every one knows how important is consultation where there are common interests to carry out. We have agricultural and horticultural societies to further the interests of those branches of industry, but there is no industry that calls louder for intelligent management and consultation than bee culture. When we consider that many bee owners are ignorant of the simplest operations of the apiary, it behooves us to do all in our power to impart that knowledge by which we can prosecute the science of bee-culture successfully. The exposition managers have offered their entire space to exhibitors free of charge. The enterprise is National in scope, and every industry will be represented. Any one wishing to exhibit, should communicate with the National Mining and Industrial Exposition Co., at Denver.

WOMAN'S INDUS. ASS'N.

Denver, Col.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about eight words; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For 4 weeks.....	10 per cent. discount.
" 8 " (3 months).....	20 " "
" 12 " (6 months).....	30 " "
" 16 " (9 months).....	40 " "
" 20 " (1 year).....	50 " "

Discount, for 1 year, in the MONTHLY alone, 25 per cent., 6 months, 10 per cent., 3 months, 5 per cent.

Discount, for 1 year, in the SEMI-MONTHLY alone, 40 per cent., 6 months, 20 per cent., 3 months, 10 per cent.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

Special Notices.

A Sample Copy of the Weekly BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employees, or some cause beyond our control.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 50
" 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to new Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

From Dr. L. James, Atlanta, Ill., we have received a section filled with thin foundation, as described on page 309. The section presents not only a very neat appearance, but the foundation is fastened substantially, it having withstood transportation and considerable rough handling.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

When changing a postoffice address, mention the old as well as the new address.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 15, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.**CHICAGO.**

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax on arrival; 18@22c. for medium grade, and 15@17c. for dark.

A. L. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, net gross, \$25; for 2 lb. do., per gross, \$42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.**CHICAGO.**

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c. R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Our honey market would be good, as there is considerable inquiry for white honey in sections, with none to satisfy the demand. It would bring 22c. readily for choice. Buckwheat honey, no sale. Extracted, 11@12c. per lb.

BEESWAX—25@30c. A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is no white comb honey in the market. We quote; Comb honey 11@16c.; extracted 7@11c.

BEESWAX—Scarce; 26@27c. THURBER & CO.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c. CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Stiff at 21@22c. for prime. R. C. GREER & CO., 117 N. Main Street.

SAN FRANCISCO.

HONEY—A little better tone is noted, owing to less favorable reports from some of the honey-producing districts. In Los Angeles county it is believed the yield will be light, but a good crop is expected in San Diego.

We quote white comb, 12@14c.; dark to good, 6@10c. Extracted, choice to extra white, 7@7½c.; dark and candied, 6@6½c. **BEESWAX**—23@25c. STEARNS & SMITH, 423 Front Street.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Bingham's Smoker Corner.

Bayou Goula, La., May 2, 1882,
Messrs. BINGHAM & HETHERINGTON, Abbeville, Mich.

Dear Sirs: The Conqueror conquers everything in the apary. It is almost a fight between my three assistants, as to who will get it first in the morning. A single puff from it will fill a double story with smoke. I will use no other after this.

Yours truly,

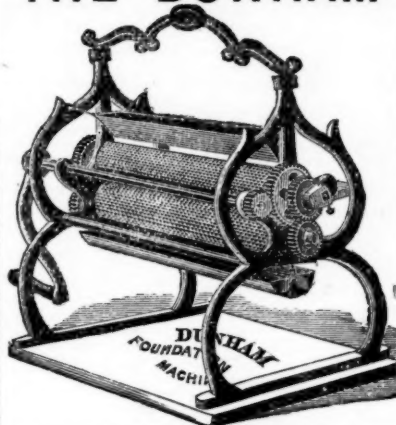
P. L. VIALON.

ONE-PIECE SECTIONS a specialty. Pound size, \$4.50 per 1,000. L. Hives 50c. Also, Italian bees for \$8 per colony. Circular free.

5m12tp BYRON WALKER & CO., Capac, Mich.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM**FOUNDATION MACHINE.**

Patented Aug. 23d, 1881.

Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law.

FRANCES A. DUNHAM,
DePere, Wis.

1882. Consult your interest, and send for my new circular and price list of colonies, Nuclei and Queens. Address,
S. D. McLEAN, Columbia, Tenn.

TIN POINTS for GLASSING HONEY

Cut by machinery; are much cheaper and better than hand-cut, and perfectly straight; 1,000 to 5,000, 25c.; 6,000 to 10,000, 22c.; over 10,000, 20c.; 6c. per 1,000 extra by mail. Samples for 3c. stamp.

W. C. GILLETTE,
LeRoy, Genesee Co., N. Y.

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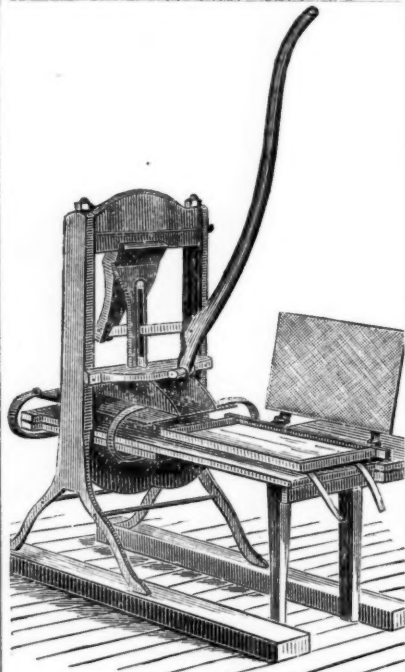
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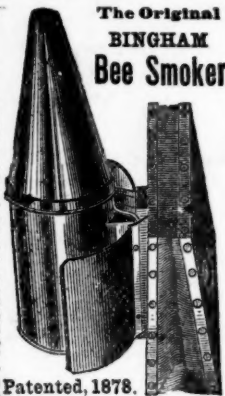
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